Title: System and Method for Creating Best-Match Softwar Objects at Run Time
Inventor(s): John L. Manuel et al. Hewlett-Packard Docket No.: 2003001 61-1
1/6

MEMORY *120*

OPERATING SYSTEM *122*

APPLICATION(S) *124*

OBJECT GENERATOR *200*

INTERFACE *210*

OBJECT FACTORY *220*

POOL *230*

OBJECT STORE *240*

100

PROCESSOR
110

LOCAL INTERFACE *160*

PERIPHERAL
DEVICE(S)
130

Laser printer   Scanner

Optical drive

132

134

136

NETWORK-
INTERFACE
DEVICE(S)
140

USER
INTERFACE

150

FIG. 1

Titl : System and Method for Cr ating Best-Match Softwar Objects at Run Time
Inventor(s): John L. Manuel et al. H wlett-Packard Docket No.: 200300161-1
2/6

DEVICE IDENTIFIER
FROM
PERIPHERAL
DEVICE

203

DEVICE IDENTIFIER
FROM
USER INTERFACE

205

OBJECT GENERATOR *200*

INTERFACE *210*

215

225

OBJECT FACTORY *220*

POOL *230*

PROXY A
231

PROXY B
232

PROXY C
233

PROXY D
234

.
.
.

PROXY *N*
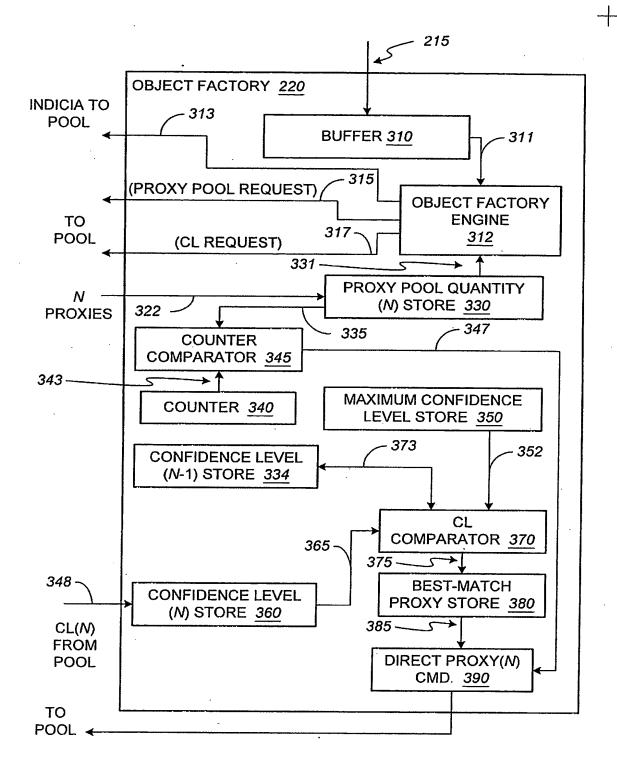*237*

235

OBJECT STORE *240*

OBJECT *245*

248

FIG. 2

Title: System and Method for Creating Best-Match Softwar Objects at Run Time
Inventor(s): John L. Manuel t al.   H wlett-Packard Dock t No.: 200300161-1
3/6

215

OBJECT FACTORY 220

INDICIA TO
POOL

313

BUFFER 310 ⟶ 311

(PROXY POOL REQUEST) 315

TO
POOL

OBJECT FACTORY
ENGINE
312

(CL REQUEST) 317

331

PROXY POOL QUANTITY
(N) STORE 330

N
PROXIES 322

335

COUNTER
COMPARATOR 345

347

343

COUNTER 340

MAXIMUM CONFIDENCE
LEVEL STORE 350

CONFIDENCE LEVEL
(N-1) STORE 334

373

352

CL
COMPARATOR 370

365

375

348

CONFIDENCE LEVEL
(N) STORE 360

BEST-MATCH
PROXY STORE 380

CL(N)
FROM
POOL

385

DIRECT PROXY(N)
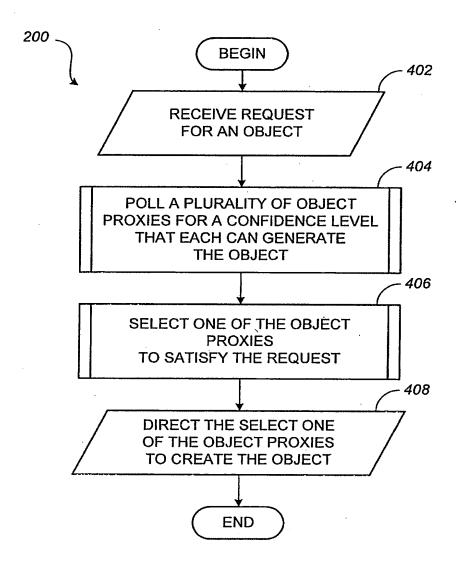CMD. 390

TO
POOL

FIG. 3

Title: System and Method for Creating Best-Match Software Objects at Run Time
Inventor(s): John L. Manuel t al.   H wlett-Packard Docket No.: 2003001 61 -1
4/6

200

BEGIN

RECEIVE REQUEST
FOR AN OBJECT

402

POLL A PLURALITY OF OBJECT
PROXIES FOR A CONFIDENCE LEVEL
THAT EACH CAN GENERATE
THE OBJECT

404

SELECT ONE OF THE OBJECT
PROXIES
TO SATISFY THE REQUEST

406

DIRECT THE SELECT ONE
OF THE OBJECT PROXIES
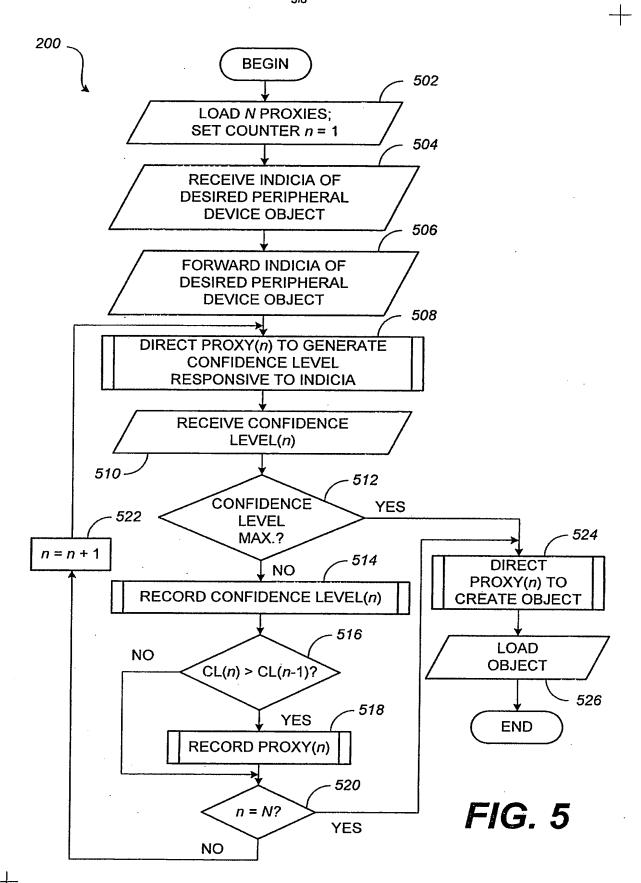TO CREATE THE OBJECT

408

END

FIG. 4

Title: System and Method for Creating Best-Match Softwar Objects at Run Time
Inventor(s): John L. Manuel et al. Hewl tt-Packard Docket No.: 200300161-1
5/6

200

BEGIN

LOAD *N* PROXIES;
SET COUNTER *n* = 1 — 502

RECEIVE INDICIA OF
DESIRED PERIPHERAL
DEVICE OBJECT — 504

FORWARD INDICIA OF
DESIRED PERIPHERAL
DEVICE OBJECT — 506

DIRECT PROXY(*n*) TO GENERATE
CONFIDENCE LEVEL
RESPONSIVE TO INDICIA — 508

RECEIVE CONFIDENCE
LEVEL(*n*)

510

CONFIDENCE
LEVEL
MAX.? — 512

YES

522

n = *n* + 1

NO — 514

RECORD CONFIDENCE LEVEL(*n*)

516

NO

CL(*n*) > CL(*n*-1)?

YES — 518

RECORD PROXY(*n*)

520

n = *N*?

YES

NO

DIRECT
PROXY(*n*) TO
CREATE OBJECT — 524

LOAD
OBJECT

526

END

FIG. 5

Title : System and Method for Creating Best-Match Software Objects at Run Time
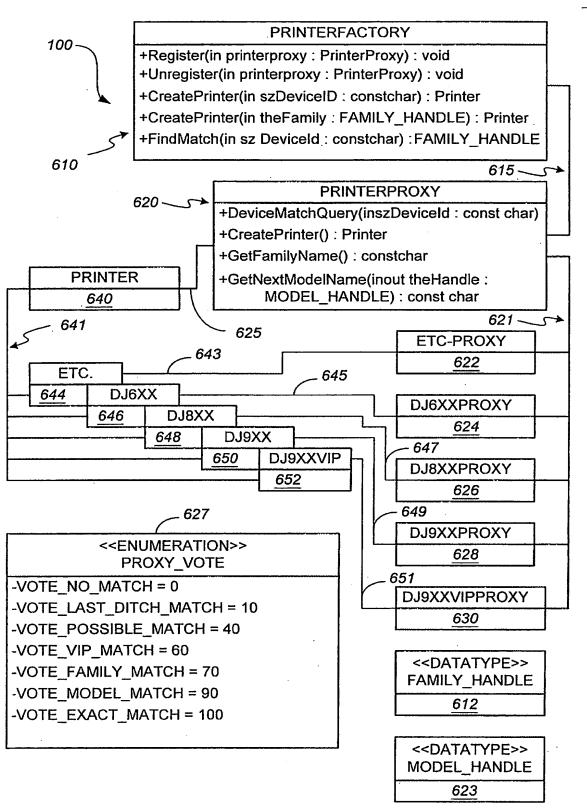Inventor(s): John L. Manuel et al.   Hewlett-Packard Docket N.: 200300161-1
6/6

PRINTERFACTORY

100

+Register(in printerproxy : PrinterProxy) : void

+Unregister(in printerproxy : PrinterProxy) : void

+CreatePrinter(in szDeviceID : constchar) : Printer

+CreatePrinter(in theFamily : FAMILY_HANDLE) : Printer

+FindMatch(in sz DeviceId : constchar) :FAMILY_HANDLE

610

615

620

PRINTERPROXY

+DeviceMatchQuery(inszDeviceId : const char)

+CreatePrinter() : Printer

+GetFamilyName() : constchar

+GetNextModelName(inout theHandle :
MODEL_HANDLE) : const char

PRINTER

640

641

625

621

643

ETC.

644

645

DJ6XX

646

DJ8XX

648

DJ9XX

650

DJ9XXVIP

652

ETC-PROXY

622

647

DJ6XXPROXY

624

649

DJ8XXPROXY

626

651

DJ9XXPROXY

628

627

<<ENUMERATION>>
PROXY_VOTE

-VOTE_NO_MATCH = 0

-VOTE_LAST_DITCH_MATCH = 10

-VOTE_POSSIBLE_MATCH = 40

-VOTE_VIP_MATCH = 60

-VOTE_FAMILY_MATCH = 70

-VOTE_MODEL_MATCH = 90

-VOTE_EXACT_MATCH = 100

DJ9XXVIPPROXY

630

<<DATATYPE>>
FAMILY_HANDLE

612

<<DATATYPE>>
MODEL_HANDLE

623

FIG. 6